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EXAMINER

ONUAKU, CHRISTOPHER O

ART UNIT PAPER NUMBER

2615

DATE MAILED: 04/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

08/614,196

Applicant(s)

Tamura et al.

Examiner

Christopher Onuaku

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 28, 2002
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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DETAILED ACTION

Request for Continued Examination

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/28/02 has been entered.

Response to Arguments

2. Applicant's arguments filed 12/05/01 have been fully considered but they are not persuasive.

Applicant argues, with reference to independent claims 1, 3, 6 and 9, that Mimura allows a user to select an area of an image that is to be ignored in setting or adjusting the lens and the exposure control which is performed on the basis of the image signal in the selected zone. The applicant then concludes that the teaching of Mimura of masking and ignoring the selected area is in fact a teaching in direct contrast to the present invention where exposure is controlled based on the image in the selected area. Examiner disagrees.

It appears that applicant has misinterpreted the teaching of Mimura, thereby completely missing the Mimura disclosure. In Mimura, the only masked area is the area of the CCD 3 (see

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Fig.1&2) where the image object is not shown. For example, the areas 21-2, 21-3, 21-7, 21-10 and 21-15 are the only areas masked.

In col.3, line 1 to col.4, line 4, Mimura discloses that the microcomputer 11 excludes the signal for the blocks 21-2, 21-3, 21-7, 21-10, and 21-15, and controls the lens drive circuit 2 on the basis of the signal for the remaining blocks. The microcomputer 11 controls the display circuit 6 so that the blocks 21-2, 21-3, 21-7, 21-10, and 21-15 are "painted over". These blocks painted over and the dividing lines disappear after a predetermined time so that only the image from the CCD will be outputted at the output terminal 9.

Once the photometric area is specified, the lens drive circuit 2 is controlled on the basis of the signal for the blocks other than the blocks 21-2, 21-3, 21-7, 21-10 and 21-15. In this way, in accordance with the embodiment, by operating the photographic area selecting switch 10, any block of the 25-divided blocks 21-1 to 21-25 on the field of image 21 can be easily specified as a masking area. And, since any block of the plural blocks into which the field of image is divided can be specified as a photographic area, the subject to be picked up can be seen by optimizing the amount of light of the subject regardless of the position where the television camera is located. Further, since the specified block(s) can be displayed, the position of a present photographic area can be apparently known, thereby permitting the photographic area to be easily set.

The added limitation "independently of the particular zone selected" by the zone selecting means is inherent in Mimura since in Mimura any particular zone or zones may be selected and in order to maintain the efficiency of Mimura (see the discussions above).

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Similar response applies to dependent claim 2 dependent on claim 1, claims 4&5 dependent on claim 3, claims 7-8 dependent on claim 6 and claim 10-16 dependent on claim 9.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Mimura et al (US 5,280,359).

Regarding claim 1, Mimura et al disclose an image pickup device for use in a television camera including a diaphragm control optimizing the light amount for a subject, comprising:

a) zone selecting means for selecting any zone on the image sensing plane in a state that said the image sensing means is sensing the subject image (see photographic area selecting switch 10; col.2, line 35 to col.3, line 28);

b) exposure detecting means for detecting an exposure condition on the basis of the image signal in a selected zone, and exposure control means for controlling an exposure based upon the detected exposure condition (see the microcomputer 11; col.2, line 55 to col.3, line 20);

c) memory means for storing control parameters outputted by the exposure control means, the memory means configured to store control parameters when an exposure control processing

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by the exposure control means is completed and an optimum exposure control state is obtained (again see microcomputer 11, and signal processing section 5 wherein the microcomputer excludes the masked blocks and controls the lens 2 on the basis of the signal for the remaining blocks to obtain optimum amount of light on the remaining photometric areas; col.2, line 55 to col.3, line 28), here the microcomputer 11 uses the "stored" optimum exposure parameters (inherently stored by the microcomputer 11) to adjust for an optimum amount of light of the remaining photometric area, some of which may be backlighted;

d) control means for, independently of the particular zone selected by the zone selecting means, controlling the exposure control means to fix an exposure control state, i.e. optimum exposure state, by using the control parameters stored in the memory means (see microcomputer 11, and the discussions above).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al in view of Munson (US 5,648,814).

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Regarding claim 2, Mimura fails to explicitly disclose wherein if the value relating to exposure is outside a prescribes range of values stored in advance, the exposure maintaining means selects an upper-limit value or a lower-limit value of the prescribed range of values as a value relating to exposure. Munson teaches in Fig.1-4 method and apparatus of a camera function of a video conferencing system enhanced such that it will operate in an automatic adjustment mode for brightness and color for only a predetermined period of time comprising microcontroller 32 which operates camera 16 in its initial period in the automatic adjustment mode. During this period, as part of the normal operation, microcontroller 32 continuously checks and determines if the image quality is "the same" as the "ideal image". If the image quality is "the same" as the "ideal image", microcontroller 32 continues operation without making any adjustments. Otherwise, microcontroller 32 adjusts brightness and color balance as appropriate. Being able to adjust the exposure value of an object to fall within a predetermined optimum range of values, for example, ideal values, helps to simplify the exposure control function in a camera. It would have been obvious to one of ordinary skill in the art to modify Mimura, as taught by Munson, to include a means to facilitate adjusting the exposure value of an object to fall within a predetermined optimum range of values, for example, ideal values, which helps to simplify the exposure control function in a camera.

7. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura et al in view of Iwasaki (US 5,461,452).

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Regarding claim 3, the claimed limitations of claim 3 are accommodated in the discussion of claim 1, except the claimed selected-zone detection means for determining whether the image signal captured by the image sensing means contains the zone upon elapse of a prescribed period of time, and outputting a signal for resetting control parameters in the memory means if the captured image signal is not contained in the zone.

Iwasaki in Fig.28&30 shows a visual axis detecting device 110 (col.18, lines 55-67) which detects the visual axis of the photographer, and a tracking device 155 (col.18, lines 64-67, and col.19, line 1 to col.21, line 6), and has approximate spectral characteristics. By adding the selected-zone detecting means feature to a camera, the photographer is better able to produce a better quality picture because of improved exposure. It would have been obvious to one of ordinary skill in the art to modify the camera of Mimura , as taught by Iwasaki, to include a selected-zone detecting feature of Iwasaki to improve the exposure control capability of the camera, thereby creating a better quality camera.

Regarding claim 4, the claimed limitations of claim 4 are accommodated in the discussion of claim 2 above.

Regarding claim 5, neither Mimura nor Iwasaki explicitly discloses the claimed selecting means for allowing a photographer to select whether maintenance of exposure is to be nullified. However, as disclosed by Iwasaki and discussed in claim 3 above, the detecting processing

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portion 115 detects the position of visual axis of the photographer. That is, the detecting processing portion is detecting what the photographer is seeing. It is then obvious that if the photographer considers the image he is seeing to be of poor quality, he can conveniently shift his line of sight to the spot where he can see an image which he considers to be of better quality. This way he has the ability to nullify or not the position of the image that the detecting processing portion 115 detects.

8. Claims 6,7&8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura in view of Iwasaki and further in view of Shimuzu (US 5,400,074).

Regarding claim 6, Mimura discloses in Fig. 1, an exposing apparatus and method for performing optimum exposure control in correspondence to a luminance level of an object comprising:

- a) the claimed zone selecting means which is discussed in claim 1;
- b) the claimed exposure detecting means which is also discussed in claim 1;
- c) the claimed exposure control means which is discussed in claim 1;
- d) the "first" claimed memory means, which again is also. discussed in claim 1;
- e) the claimed "second" memory means for storing a video signal of the zone is disclosed by Iwasaki in Fig.45 and column 30, lines 57-67 and column 31, lines 1-6. Here Iwasaki shows that the reading circuit 192 reads the outputs from the element indicated by the coordinates (Xa,Ya) from the CCD 107 according to the decision result indicating that the object is changed.

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The transferring circuit 193 transfers the above-named coordinates (X_a, Y_a), and the outputs from the element obtained by the reading circuit 192 as coordinates (X_b, Y_b) indicating the position of new object, and these data are stored in the coordinates holding portion 156. Thereafter, the tracking device 155 executes tracking processing of the position of the object on the basis of the above-mentioned position of the new object.

Neither Mimura nor Iwasaki shows the claimed detection means for determining whether a zoomed image signal captured by the image sensing means contains the video signal of the zone stored in the "second" memory means, and outputting a signal for resetting the control parameters in the "first" memory means if the captured image signal is not contained in the zone.

However, Shimuzu teaches in Fig.5,6&7, col.4, line 62 to col.5, line 32, a video camera device comprising a zoom lens position detecting circuit 15. This zoom lens position detecting circuit detects the amount of movement of the zoom lens in the inner focus lens assembly 1, and the detected amount is supplied to the ROM 16. The ROM 16 stores amounts of F-drop corresponding to various positions of the zoom lens, as shown in Fig.6. An amount of F-drop corresponding to the position of the zoom lens is supplied from ROM 16 to the control amount computing circuit 12 which calculates the open amount for the iris 2, and a gain for the AGC amplifier 4, on the basis of outputs from the loop filter 11 and the ROM 16. Thereafter, the output from the control amount computing circuit 12 is sent to the iris driving circuit 13 and the D/A converter 14. The output from the iris driving circuit 13 is then sent to the iris 2 to control the open amount thereof. Fig.7 shows a graph where the gain B of the AGC amplifier 4 is corrected

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to the gain curve B' by adding a gain amount 'W' corresponding to the amount of F-drop. This gain correction process shows that the zoomed video signal captured by the image sensor is reset and then corrected if the zoomed video signal is not contained.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the camera of Mimura, to include a zoomed video signal detecting means, as taught by Shimuzu, as an added feature to increase the versatility of the camera.

Regarding claim 7, the claimed limitations of claim 7 are accommodated in the discussions of claim 4 above.

Regarding claim 8, the claimed limitations of claim 8 are accommodated in the discussions of claim 5 above.

9. Claims 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura in view of Iwasaki and further in view of Faltermeier (US 5,579,156).

Regarding claim 9, the claimed limitations of claim 9 are accommodated in the discussions of claim 3 above, except adjusting means for applying a prescribed adjustment to the image signal of a zone (see col.3, lines 12-28).

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Mimura discloses display means (see display circuit 6; and col.2, line 29 to col.4, line 4). Mimura and Iwasaki fail to disclose a pointing device for selecting any zone in a screen displayed by the display means. Faltermeier et al disclose in Fig.1 a photomicroscope with a video camera and an exposure time control for a still camera comprising the claimed display means(see monitor 25) for displaying the image area recorded with the camera, and the claimed pointing device(see the track ball 27c; col.4, lines 43-57) which is used to select the object areas of particular interest, for exposure metering which ensures that these object areas are suitably exposed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Mimura by realizing Mimura with a pointing device, as taught by Faltermeier, for selecting object area of particular interest.

Regarding claim 10, Faltermeier further teaches wherein the pointing device is a line-of-sight detecting device for detecting position of a photographer's line of sight directed to a screen (see computer mouse; col.7, lines 12-16). It is well known that the movement of the operator's line of sight corresponds to the movement of the mouse. It would have been obvious to add a mouse to the system of Mimura as a line-of-sight detecting device for detecting, for example, the position of a photographer's line of sight directed to screen, since it is well known that the movement of the operator's line of sight corresponds to the movement of the mouse.

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Regarding claim 11&12, Faltermeier teaches a track ball and computer mouse as a pointing devices (see Fig.1, col.4 lines 43-57 and col.6, line 66 to col.7, line 18.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the camera of Mimura realizing the apparatus of Mimura with a mouse/track ball as a pointing device in order to increase the versatility of Mimura, thereby making the apparatus more commercially appealing.

Regarding claim 13, Mimura fails to explicitly disclose wherein the adjusting means adjusts exposure of the image sensing device by adjusting f-stop(focusing), a shutter(exposure), and gain. Iwasaki further teaches wherein the adjusting means adjusts exposure of the image sensing device by adjusting f-stop(focusing), shutter(exposure), and gain (see Fig.28; col.21). It would have been obvious to add an exposure adjusting means to Mimura in order, for example, to adjust the exposure of the image sensing device by adjusting f-stop(focusing), shutter(exposure), and gain, as taught by Iwasaki.

Regarding claim 14, the claimed limitation wherein when adjustment by the adjusting means has attained a prescribed state, the control means maintains the state of adjustment prevailing at this time is accommodated in the discussions of claim I above.

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Regarding claim 15, in Fig. 1, and column 4, lines 50-53, Faltermeier teaches the claimed selecting means for allowing the photographer to select whether storage of the adjusting data by the control means is performed or not is met by the disclosure that via switching knobs 27b (adjusting means, see claim 1), the user, which is the photographer, can choose whether the entire video image shall be used for exposure control or only an image area of alternatively 1%, 3% or 10% of the entire image surface. Since the photographer chooses which image portion he wants to video, the control means stores only that image chosen by the photographer through the switching knobs 27b.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mimura in view of Iwasaki and Faltermeier et al and further in view of Arai et al (US 5,570,156).

Regarding claim 16, Mimura, Iwasaki and Faltermeier fail to disclose the claimed limitation wherein the screen is a monitor screen of an electronic viewfinder.

However, Arai. et al disclose in Fig.3a camera utilizing detection of visual line comprising the claimed electronic viewfinder with a monitor screen which is met by the electronic viewfinder 101(col.4, lines 58-59) which inherently has a monitor screen for viewing video images of objects.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the camera of Mimura, as taught by Arai. et al, to include an electronic viewfinder, as an added feature, in order to monitor video images of objects, and thereby increase the exposure control range of the video camera of Mimura.

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Conclusion

11. Any inquiry concerning this communication or earlier communications from this examiner should be directed to Christopher Onuaku whose telephone number is (703) 308-7555. The examiner can normally be reached on Tuesday to Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Monday.

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Andrew Christensen, can be reached on (703) 308-9644.

Any response to this action should be mailed to:

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or faxed to:

(703) 872-9314, (for formal communications intended for entry)


and (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to Customer Service whose telephone number is (703) 306-0377.


COO

4/2/02


ANDREW B. CHRISTENSEN
PRIMARY EXAMINER